



MI FluFocus

Influenza Surveillance and Avian Influenza Update

Bureau of Epidemiology
Bureau of Laboratories

Michigan Department
of Community Health



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New updates in this issue:

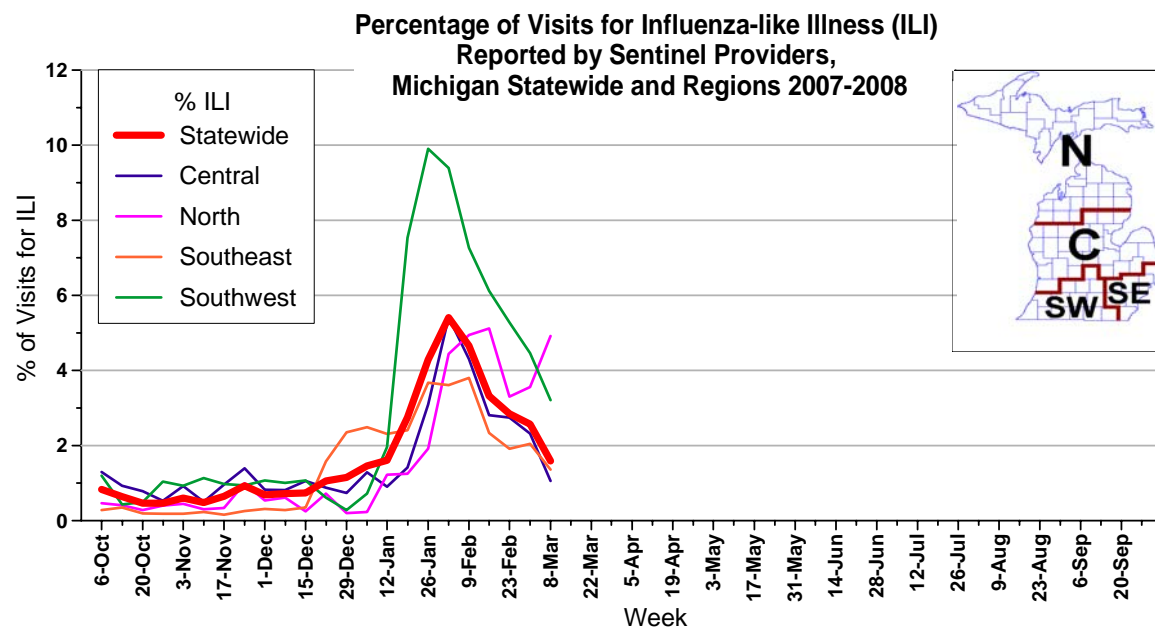
- **Michigan Surveillance:** Influenza activity continues to decline; Michigan reports Regional activity.
- **National Surveillance:** Influenza activity still declining in week 9.
- **Avian Influenza:** Egypt reports new human H5N1 case; multiple countries report poultry outbreaks.

Michigan Disease Surveillance System: The week ending March 8 saw aggregate flu-like illness and individual influenza reports decline from last week's levels. Aggregate flu-like illness reports are comparable with numbers seen this time last year, while individual influenza reports are notably higher.

Emergency Department Surveillance: Emergency department visits from both respiratory complaints and constitutional complaints dropped again this week. Respiratory complaints are slightly higher than numbers that were seen this time last year, while constitutional complaints are consistent with last year. Three constitutional alerts in the C(1), N(1) and SE(1) Influenza Surveillance Regions and seven respiratory alerts in the C(3), N(2) and SW(2) Influenza Surveillance Regions were generated last week.

Over-the-Counter Product Surveillance: OTC product sales activity was decreasing or steady last week. All product sales, with the exception of cough and cold medicine, saw a slight decrease over the last week. Cough and cold medicine remained steady near last week's levels. The indicator levels are comparable to those seen at this time last year.

Sentinel Surveillance (as of March 13): The proportion of visits due to influenza-like illness (ILI) in Michigan has continued to decrease from its peak in late Jan. over the past several weeks, and is at 1.6% for the week ending March 8. This represents 143 cases of ILI out of 8978 total patient visits; 32 sentinels provided data for this report. The proportion of visits due to ILI was 1.1% in the Central region, 1.3% in the Southeast region, and 3.2% in the Southwest region. Although the North region appears to have increased to 4.9%, this is based on only 3 reports, and will probably decrease as additional reports are received.



As part of pandemic influenza preparedness, CDC and MDCH highly encourage year-round participation from all sentinel providers. New practices are encouraged to join the sentinel surveillance program today! Contact Rachel Potter at 517-335-9710 or potterr1@michigan.gov for more information.

Laboratory Surveillance (as of March 13): For the 2007-2008 influenza season, the MDCH Bureau of Laboratories has identified 216 influenza isolates:

- 169 A/H3N2: Central (52); Southeast (48); Southwest (44); North (25)
- 3 A/H1N1: Southeast (2); North (1)
- 13 A subtype pending: North (6); Southwest (3); Southeast (2); Central (2)
- 31 B: Southeast (15); North (8); Southwest (4); Central (3); Indiana (1). 26 have been typed as B/Shanghai/361/2002-like and 5 are pending subtyping.

Sentinel laboratories are reporting decreasing levels of positive influenza A tests and low but steady to increasing numbers of positive influenza B tests. RSV activity continues to be steady.

***As a reminder, the positive predictive value of influenza rapid tests decreases during times of low influenza prevalence. MDCH suggests that during periods of low influenza activity in your community, all positive rapid tests results be confirmed by sending in a specimen for viral culture; this can be arranged through your local health department.

Influenza-Associated Pediatric Mortality (as of March 13): For the 2007-2008 season, there are no confirmed reports of influenza-related pediatric mortality in Michigan.

***The CDC has asked all states to collect information on any pediatric death associated with influenza infection. This includes not only any death in a child (<18 years) resulting from a compatible illness confirmed to be influenza by an appropriate diagnostic test, but also any unexplained death with evidence of an infectious process in a child. See www.michigan.gov/documents/fluletter_107562_7.pdf for the complete protocol. Please immediately call MDCH to ensure that proper clinical specimens are obtained.

Congregate Settings Outbreaks (as of March 13): Congregate setting outbreaks have been reported in all regions of the state. Three outbreaks have been culture-confirmed as influenza A/H3N2 at MDCH for the 2007-2008 influenza season.

National (The Associated Press [edited], March 8): An influenza outbreak at a state prison has sickened more than 500 prisoners since last month, forcing the facility to bar new inmates and visitors, officials said Friday.

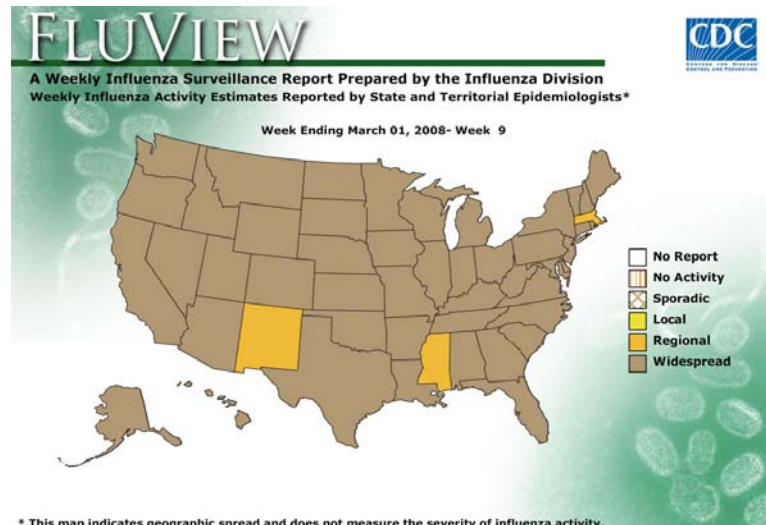
Inmates at Chuckawalla Valley State Prison began experiencing flu-like symptoms on Feb. 23, said prison administrative assistant Lt. Debbie Asuncion said. The symptoms include fever, cough and body aches. Asuncion said 546 inmates have become ill and 10 of them were hospitalized.

Two inmates died and those deaths were being investigated to determine if they were related to influenza, Asuncion said. Eight remained hospitalized and the rest were being treated at the prison.

The prison was closed to all visitors, including attorneys and volunteers, to keep the public from being exposed. The prison also was not receiving or transferring inmates and was restricting inmate movement within the prison, Asuncion said. Chuckawalla Valley State prison is a low-to-medium security prison that currently houses 3,147 inmates, Asuncion said.

National (CDC, March 7): During week 9 (February 24 – March 1, 2008), influenza activity continued to decrease in the United States. Two thousand four hundred one (27.2%) specimens tested by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories were positive for influenza. The proportion of deaths attributed to pneumonia and influenza was above the epidemic threshold for the eighth consecutive week. The proportion of outpatient visits for influenza-like illness (ILI) and acute respiratory illness (ARI) was above national baseline levels. ILI decreased in seven of the nine regions compared to week 8, but remained above region-specific baselines in all nine regions. The Mid-Atlantic and West North Central regions reported ARI at or above their region specific baselines. Forty-seven states reported widespread influenza activity; three states reported regional influenza activity; and the District of Columbia reported local influenza activity.

To access the entire CDC weekly surveillance report throughout the influenza season, visit <http://www.cdc.gov/flu/weekly/fluactivity.htm>



International (The Associated Press [edited], March 13): A top Hong Kong scientist said Thursday a flu outbreak that prompted authorities to keep more than 500,000 primary and kindergarten students home wasn't deadlier than past viruses.

Yuen Kwok-yung and a panel of experts studied two flu patients who died amid the outbreak -- a 7-year-old boy and a 3-year-old girl -- and found that the flu virus hadn't spread beyond their lungs, which suggests the virus isn't exceptionally virulent. "If it is a more virulent virus, we should be able to find the flu virus in other organs," Yuen told reporters after a four-hour meeting with his colleagues.

Earlier on Thursday, the World Health Organization also said there was no sign that the situation in Hong Kong was anything but a regular seasonal flu outbreak. The outbreak has not been linked to bird flu, which has been detected in birds in Hong Kong. Bird flu remains difficult for humans to catch, though scientists fear the virus that causes it could eventually mutate into a form that spreads easily among humans.

But the new flu outbreak raised memories of the deadly severe acute respiratory syndrome, or SARS, which surfaced in southern China in November 2002 and later killed 299 people in Hong Kong. That disease ground this bustling financial capital to a halt as locals avoided going out, while the government was criticized for not responding quickly enough.

The government has ordered all kindergartens, primary and special education schools closed for two weeks starting Thursday, Health Secretary York Chow said. It was the first time the government has closed schools for public health reasons since SARS.

But some students and their parents missed the late Wednesday announcement and went to school anyway. At the Cho Yiu Catholic Primary School, nine students arrived early Thursday. School staff took their temperature and gave them masks. The students read picture books instead of attending class.

"I'm worried that I'll get infected. Many classmates have been infected with the flu. I'm afraid," said 9-year-old Winnie Ting, who was already wearing a mask before arriving at school.

Principal Chan Kwok-ming said on average 20 students took sick leave every day in recent days.

Explaining his decision on Thursday, Chow said he acted quickly because "when you wait until you have all the data, it's too late." The closure will affect nearly 560,000 students at 1,745 schools, according to enrollment figures from the 2006-2007 academic year.

WHO spokesman Gregory Hartl said the first child who died tested negative for all types of influenza viruses. The second child tested positive for the flu but also suffered from an underlying metabolic disease. The third -- a 7-year-old boy who died Tuesday -- had both the flu and encephalitis. Another WHO spokesman, Peter Cordingley, said Thursday from Manila that "this is just regular seasonal flu."

International (WHO, March 7): During weeks 8–9, the level of overall influenza activity in the world remained unchanged in most countries of the Northern Europe and North America, where most viruses were detected. The highest level of influenza activity in the Northern hemisphere is expected for this time of the year. However a slight decrease of influenza activity was observed in some countries in Northern Europe. Influenza A (H1N1) viruses predominated, but the proportion of influenza B steadily increased in the last weeks. Influenza A (H3N2) circulated as well.

The entire report can be found online at <http://www.who.int/csr/disease/influenza/update/en/>

MDCH reported **REGIONAL ACTIVITY** to the CDC for the week ending March 8, 2008.

For stakeholders interested in additional information regarding influenza vaccination and education, the MDCH publication *Michigan FluBytes* is available online at http://www.michigan.gov/mdch/0,1607,7-132-2940_2955_22779_40563-125027--,00.html. *FluBytes* is published weekly during the influenza season.

End of Seasonal Report

Avian Influenza Activity

WHO Pandemic Phase: Phase 3 - Human infection(s) with a new subtype, but no human-to-human spread or rare instances of spread to a close contact.

International, Human (WHO, March 11): The Ministry of Health and Population of Egypt has announced a new human case of avian influenza A(H5N1) virus infection. The case is an 8-year-old male from Etsa District, Fayum Governorate. He was hospitalized with symptoms on 3 March. He is receiving treatment and is in a stable condition.

Investigations into the source of his infection indicate a history of contact with sick and dead poultry. Of the 47 cases confirmed to date in Egypt, 20 have been fatal.

International, Poultry (Thanhniem News [edited], March 8): Some 3700 birds were culled at a poultry farm in Soc Son District after a bird flu outbreak infected nearly 2-3rds of the farm's livestock, the Hanoi Animal Health Department reported Thursday [6 Mar 2008]. The northern province of Tuyen Quang also reported an outbreak in Son Duong District.

Northern Viet Nam is seeing a massive outspread of bird flu epidemic as 8 out of the 12 provinces and city hit by the epidemic nationwide are in the north, including Hai Duong, Quang Ninh, Ninh Binh, Phu Tho, Nam Dinh, Ha Nam, Tuyen Quang and Hanoi.

Central provinces include Quang Nam and Quang Binh. The southern provinces of Tra Vinh and Vinh Long are also hit. The southern animal health departments are strengthening control over slaughtering and trading of poultry. They also require farmers to have their poultry vaccinated.

International, Poultry (Telegraph India [edited], March 8): Fresh cases of bird flu have been detected in 2 Murshidabad villages [India], weeks after the Bengal government said culling operations were over and lifted the state-wide ban on selling chickens and ducks.

District magistrate Subir Bhadra confirmed tonight that samples sent to the National Animal Research Laboratory in Bhopal from the 2 villages, Nayamukundapur and Bothra, had tested positive.

Bhadra said about 60 rapid response teams would be trained tomorrow [9 Mar 2008] so they could start culling chickens and ducks in the affected areas from Monday [10 Mar 2008] morning.

The samples were sent 3 days back after 600 chickens died in Nayamukundapur in Raghunathgunj Block II, about 50 km from Behrampore, and over 300 perished in Bothra in Murshidabad-Jiagunj block, about 20 km from the district headquarters.

In Calcutta, animal resource development minister Anisur Rahman said he had heard about the fresh outbreak. "We didn't carry out culling operations in 2 freshly affected blocks of Murshidabad in January [2008] when bird flu 1st hit Bengal. We shall begin culling there in full swing from Monday [10 Mar 2008]."

The minister said he would visit the affected blocks tomorrow or on Monday [10 Mar 2008] after briefing the chief minister. "The situation is indeed worrisome," he added.

The state government had ordered culling operations from mid-January 2008 after 16 of Bengal's 19 districts were found to have been affected by the deadly H5N1 strain of avian influenza. On 22 Feb 2008, the government resumed culling in Murshidabad and Birbhum after a central government report said the job was incomplete in parts of the 2 districts.

An official in Murshidabad, about 220 km from Calcutta, said the administration launched a campaign tonight over loudspeakers, asking people to cooperate and hand over their poultry when culling teams visit their homes on Monday [10 Mar 2008].

International, Poultry (ANTARA News [edited], March 12): Makassar Mayor Ilham Arief Sirajuddin has ordered the culling of poultry living within a radius of one kilometer from a bird flu outbreak at the city's IDI complex in Antang [Indonesia]. "This is to follow up on the discovery of bird flu infection in the area last week," Mayor Sirajuddin said here on Wednesday.

The culling was needed to curb the bird flu outbreak following the sudden deaths of tens of chickens in the Antang area, Makassar, last week. A Makassar resident was also believed to have been infected with the H5N1 avian influenza (AI) virus.

The patient, identified as Ririn (12 years old), is currently being treated intensively at Wahidin Sudirohusodo Regional Public Hospital, Makassar. "We have received a patient who has symptoms of bird flu. However, we cannot yet confirm it yet because we need to examine samples of her blood first," Dr Kadir, medical director of Wahidin Hospital, said.

Two to three days were needed to get the results of laboratory tests on the patient's blood sample, he said.

According to data of the Indonesian Health Ministry recently, AI has so far infected a total of 129 people in Indonesia of whom 105 have died. Indonesia's AI mortality rate is the highest in the world.

International, Poultry (Asia Pulse Limited, March 12): Some 6,000 chickens died of avian influenza in a poultry farm in Batiaghata upazila [Bangladesh] in last six days till Wednesday afternoon.

Owner of Chhaya Poultry Farm Sheikh Abed Ali said the chickens started dying in his poultry farm from early Friday.

Two samples of the dead chickens were sent to Dhaka for laboratory test and the laboratory found avian influenza in the samples.

Sheikh Abed Ali said he had 8,000 chickens in his poultry farm, of which, 6,000 died till 3pm today.

Deputy Commissioner SM Feroz Alam and UNO Sarafat Hossain admitted the incident and said that the administration is taking proper initiative in this regard.

International, Wild Birds (Xinhua News, March 8): An oriental magpie robin found dead earlier in Hong Kong has tested positive for the deadly H5N1 strain of the bird flu virus, the Agriculture, Fisheries and Conservation Department of Hong Kong Special Administrative Region said in a press release Friday [7 Mar 2008].

"An oriental magpie robin was confirmed to be H5N1 positive after a series of laboratory tests," said the Department.

The dead bird was collected on 29 Feb 2008 near a management center in Tai Po Kau Nature Reserve in the northern district of New Territories, a government spokesman said, adding that the oriental magpie robin is a common resident in Hong Kong. Hong Kong has reported 9 cases of bird infections of the H5N1 virus since November 2007. The H5N1 strain typically gets more active during the cold and dry winters.

Authorities in Hong Kong have been on alert against the virus, with contingency plans and education programs aimed at informing the public about bird flu. More than 300 people from government departments, the Hong Kong International Airport and airline held an exercise in Hong Kong Friday [7 Mar 2008], simulating a suspected case of H5N1 avian influenza on a plane at the Hong Kong International Airport.

The government spokesman also reminded the public to observe good hygiene Friday. "They should avoid personal contact with wild birds or live poultry and clean their hands thoroughly after coming into contact with them," he said.

International, Animals (Reuters, March 11): Bird flu killed four civets in a Vietnamese national park, the second time the rare type of mammal was reported to have died there of the H5N1 virus since 2005, a park official said on Tuesday.

Four endangered Owston's palm civets died early last month at Cuc Phuong park and tests of their samples found they had the H5N1 virus, the official said.

"Visitors are not allowed to come near the civet's area now," the official said by telephone from the park about 90 km (55 miles) south of Hanoi in Ninh Binh province.

In June 2005 three civets, born in captivity and raised in the same cage, died at the park and tests later confirmed they had been infected by bird flu, park officials said. The park has eight of the rare cat-like civets left.

Civets eat pork, worms and fruit, but not poultry.

However, Ninh Binh is one of nine locations where outbreaks have been detected among poultry in the past month, including a farm outside Hanoi, the Animal Health Department said.

It is not the first time that bird flu has killed exotic animals. The H5N1 virus has infected ostriches in South Africa, a clouded leopard and tigers in Thailand.

One of China's top doctors has said that the H5N1 virus has shown signs of mutation and can kill humans more easily if treatment is not given early enough, newspapers reported on Tuesday [ID:nHKG228879].

The H5N1 virus has infected 368 people around the world since 2003, killing 234 of them, including 51 in Vietnam.

Experts fear it could trigger a pandemic killing millions if it ever transmits efficiently among people.

Michigan Wild Bird Surveillance (USDA, as of March 13): For the 2007 testing season, 1936 Michigan samples have been taken so far, comprised of 100 live bird samples, 1385 hunter-killed birds, 176 morbidity/mortality samples, and 275 environmental samples.

H5N1 subtype H5N1 has not been recovered from any Michigan samples tested to date, or from the 90,751 birds or environmental samples tested nationwide. The 2007 testing season will run from April 1, 2007-March 31, 2008. For more information, visit the National HPAI Early Detection Data System website at <http://wildlifedisease.nh.gov/ai/>.

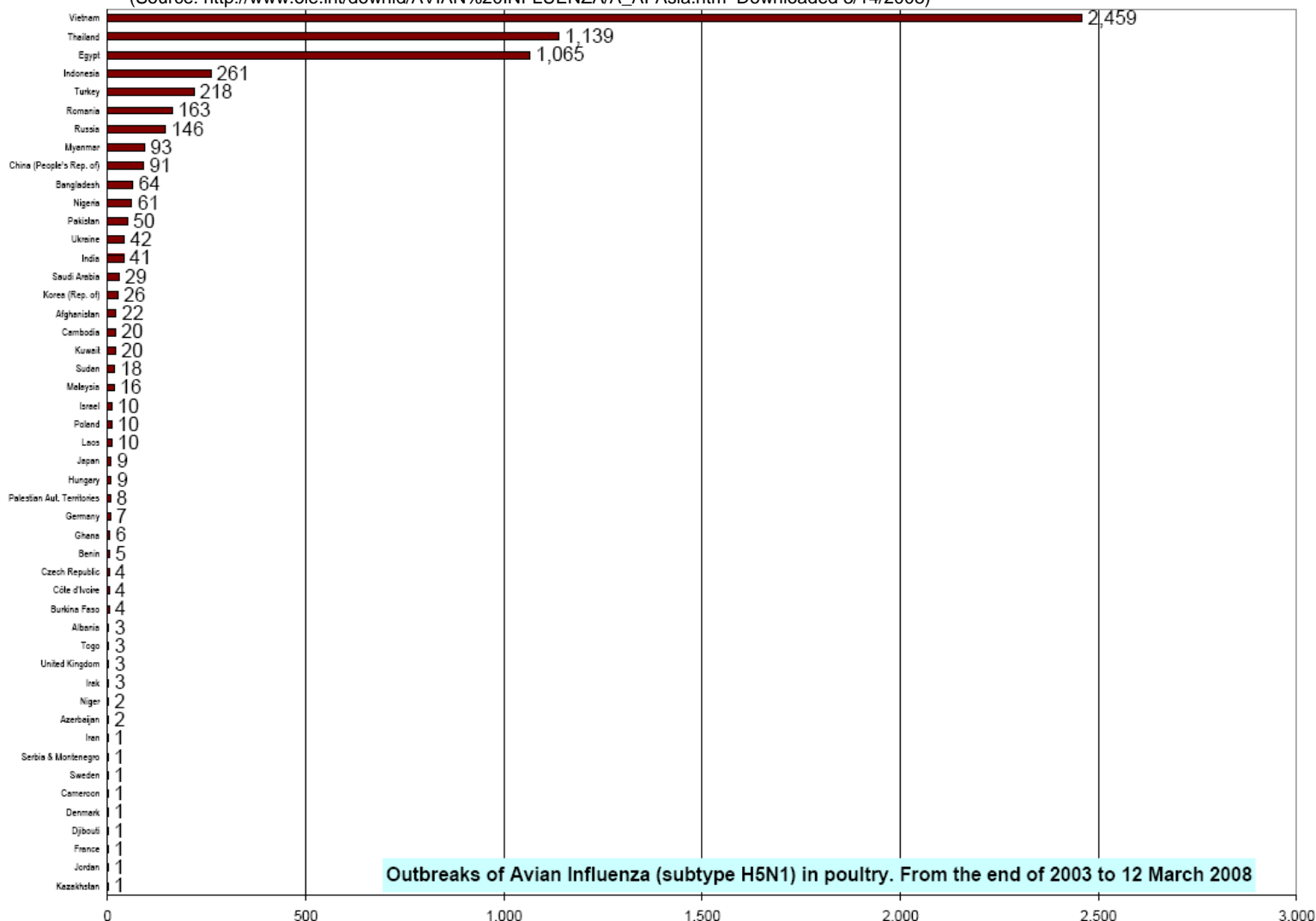
To learn about avian influenza surveillance in Michigan wild birds or to report dead waterfowl, go to Michigan's Emerging Disease website at <http://www.michigan.gov/emergingdiseases>.

Please contact Susan Vagasky at VagaskyS@Michigan.gov with any questions regarding this newsletter or to be added to the weekly electronic mailing list.

Contributors

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Table 1. H5N1 Influenza in Poultry (Outbreaks up to March 12, 2008)(Source: http://www.oie.int/downld/AVIAN%20INFLUENZA/A_AI-Asia.htm Downloaded 3/14/2008)**Table 2. H5N1 Influenza in Humans (Cases up to March 11, 2008)**

(http://www.who.int/csr/disease/avian_influenza/country/cases_table_2008_03_11/en/index.html Downloaded 3/11/2008)

Cumulative number of lab-confirmed human cases reported to WHO. Total number of cases includes deaths.

Country	2003		2004		2005		2006		2007		2008		Total	
	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	8	5
Cambodia	0	0	0	0	4	4	2	2	1	1	0	0	7	7
China	1	1	0	0	8	5	13	8	5	3	3	3	30	20
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	4	1	47	20
Indonesia	0	0	0	0	20	13	55	45	42	37	12	10	129	105
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	3	2
Lao People's Dem. Rep.	0	0	0	0	0	0	0	0	2	2	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	1	1	0	0	1	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	4	4	105	51
Total	4	4	46	32	98	43	115	79	86	59	23	18	372	235